

# *Reinvigorating New York's Academic Biomedical Research Enterprise*

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A critical element in the quality of life in New York and in the health of some of its most important institutions has been eroding slowly for decades. There is reason to believe that the worst is yet to come.

New York was long the nation's leader in biomedical research, boasting several world-class academic health science centers, universities, and free-standing research institutes, and leading the entire country in the portion of research support awarded by the National Institutes of Health (NIH). Like the arts and financial services, the academic medical enterprise came to be recognized as a major component of the intellectual capital of both New York City and New York State.

A robust biomedical research enterprise is essential to maintaining the quality and strength of New York's health-care system. It provides access to the most advanced treatments, trains the next generation of physicians, and serves as a guarantor of the quality of health care and medical education through its effect as a magnet for recruiting and retaining the finest faculty.

The benefits of the biomedical research enterprise can also be measured in economic terms. Biomedical research generates more than a billion dollars annually in wages and salaries in the New

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York City region, an economic contribution further enhanced by substantial capital expenditures, which provide vital support for the region's construction and related industries.

A third important contribution of academic biomedical research relates to its essential partnership with the biotechnology industry in New York. Academic medicine is the incubator of diagnostic and therapeutic discoveries, which, when further developed by industry, enhance the quality of health care and yield substantial economic benefits to the region.

For well over a decade, New York's academic health science centers, universities, and free-standing research institutes have been experiencing increasing difficulty in attracting and retaining the highest-quality scientists. By 1990, New York had slipped from its long-held national leadership position in NIH funding; further dramatic declines are likely over the next several years. The factors that underlie this decline include powerful cooperative public-private efforts launched by other states to bolster their academic medicine enterprises as they have recognized the essential quality of life and economic benefits of this important sector. Such initiatives have attracted investigators away from New York's institutions.

In this issue of the *Bulletin*, the severity of New York's decline is highlighted in a detailed and insightful analysis of trends in NIH funding by Sturman and his colleagues from the New York State Department of Health.[1] They document that New York's share of total NIH support fell 27% between 1981 and 1995 and that New York was the only state of the top 10 in NIH support to experience a decline in the number of funded applicants to NIH during this period. During this same interval, the number of funded principal investigators in California increased by more than 800 and in Massachusetts by more than 600. If New York had maintained the percentage of NIH funding it received in 1981 and 1982, in 1995 its institutions would have garnered $315 million more than they actually received. According to the analysis of Aries and Sklar, these additional funds would have accounted for nearly 9,000 jobs in 1995 alone.[2]

The declines in NIH funding, however, are only half the story. It has long been recognized that New York's large teaching hospitals and medical schools are interdependent. Whereas the schools of medicine play an important role in enhancing the quality of faculty, students, and health care, the hospitals have long been a source of significant financial support for the schools. It has, in fact, been the case that the hospitals are major supporters of the medical schools, and have supplemented NIH funds, endowment earnings, and private philanthropy. Over the past several years, New York's major teaching hospitals have come under increasingly severe financial pressure, superimposed on long-standing fiscal constraints related to state regulations: substantial reductions in Medicare and Medicaid payments, coupled with the reduced payments associated with the accelerating penetration of managed care, have severely limited if not eliminated the capacity of New York's teaching hospitals to serve as a major source of financial support for schools of medicine in the state.

Some efforts to turn the situation around are underway, but much more is needed. In 1991 the Commission on Biomedical Research and Development was established as a public-private initiative to enhance the competitive position of the academic as well as the for-profit biomedical research community in the New York City region. The Commission brought together leaders from the worlds of health policy, academic medicine, business, labor, and government, and conducted detailed analyses to identify the factors underlying the declining status of academic medicine in New York. Operating under the aegis of the New York Academy of Medicine, and supported by grants from the Carnegie Corporation of New York, the New York Community Trust, and the New York State Urban Development Corporation, the Commission's influential report of December, 1993 detailed the declining status of the entire biomedical research enterprise in New York.[3] It proposed a number of specific action steps, including creation of a biomedical support fund to attract and support the next generation of leading biomedical researchers; greater state and local government support for the development of the biotechnology

industry; and creation of a coordinating function in clinical research, to establish New York as the nation's clinical research leader. As a follow-up to the Commission, an ongoing Council on Biomedical Research and Development has been established at the New York Academy of Medicine with strong support from New York State, due in large part to the vision of New York State Senator Roy Goodman. The Council has served as a mechanism through which the various academic health science centers and research institutions in New York City can work collaboratively. For example, a joint initiative is now under development to establish a New York City collaborative clinical research organization, not only to restore clinical research in New York City to its former pre-eminence, but also to provide economic value to the participating academic centers. In addition, under the aegis of the Greater New York Hospital Association, a new entity, the Academic Medicine Development Corporation (AMDEC) has been established recently to attract venture capital that will support commercialization of promising discoveries in New York's academic medical laboratories and develop federal and other funds to support multi-institutional collaborative initiatives. An additional important recent initiative, proposed by New York City Council President Peter Vallone, seeks to establish a biomedical research fund to support promising young investigators in New York City's medical schools and research institutes.

Although these initiatives are promising, taken together they will likely be inadequate to alter the course of the overall biomedical research enterprise in New York in a continuing way. What is needed is a broad-based, far more ambitious commitment on the part of city and state government, as well as private sources, to provide the substantial support needed to permit New York's academic medical centers and biomedical research institutions to compete effectively with those in Massachusetts, Maryland, California, Pennsylvania, and other states that have developed effective approaches to sustain and enhance their biomedical research capacities. Now is the time for a coherent strategic plan for the resuscitation of New York City's academic biomedical enterprise.

It is essential, at this critical juncture, for us not to underestimate the magnitude of the commitment needed if we are to get New York's academic biomedical enterprise back on track. Support of only four to five new young investigators at each of the state's medical schools and research institutes will require over 15 million dollars per year. An investment at this level, sustained over several years, will be necessary to break the deepening cycle of decline. In relation to the size of the academic biomedical enterprise, the economic implications, and the broader benefits to be realized, this is an exceptionally modest and timely investment. If this opportunity is lost, it will take with it one of the great jewels of New York, an important sustaining component of both our economic strength and our quality of life.

## *References*

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